

Mini Size Wide Band Coupler (MSWBC)

Key Features

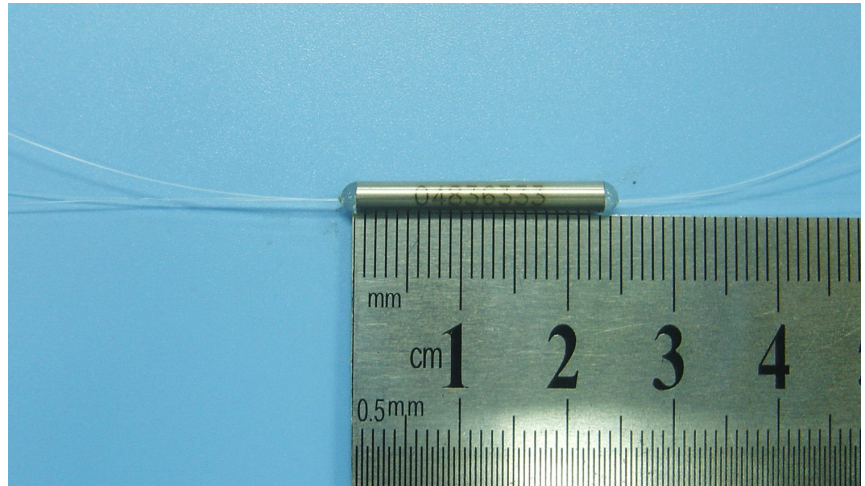
- Mini size
- Low excess loss
- Low PDL and low WDL
- High stability and reliability

DK Photonics uses bandwidth expanding techniques (asymmetric techniques) to build the wide band coupler(WBC). The WBC has an operating bandwidth of $\pm 40\text{nm}$, low excess loss and PDL.

The mini size WBC is designed for the compact optical modules and communication systems.

Applications

- Mini size EDFA
- Mini size transmitter/receiver module
- Optical communication systems
- Testing instruments



For more Info

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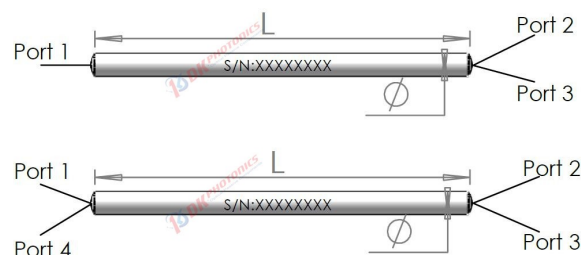
Add.:

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Dahe Road, Longhua Dis.,

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Package Dimension



*Due to ongoing design improvements, the package size is subject to change. Please contact DK Photonics for confirmation if you have special requirements.

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Performance Specifications

| Parameter | Unit | Values | | | |
|------------------------|------|---------------------------------|-------------------|-------------------|-------------------|
| Operating wavelength | nm | 1310 or 1550, others on request | | | |
| Operating bandwidth | nm | ±40 | | | |
| Configuration | - | 1×2 or 2×2 | | | |
| Package size (Φ×L) | mm | Φ3.0/Φ2.4×30 | | Φ2.4×25 | |
| Grade | - | P | A | P | A |
| Typical excess loss | dB | 0.1 | 0.15 | 0.15 | 0.25 |
| 50/50 | dB | ≤3.50 | ≤3.70 | ≤3.60 | ≤3.80 |
| 40/60 | dB | ≤4.50/2.70 | ≤4.80/2.90 | ≤4.60/2.80 | ≤4.90/3.00 |
| 30/70 | dB | ≤5.80/2.00 | ≤6.10/2.10 | ≤5.90/2.10 | ≤6.30/2.20 |
| 20/80 | dB | ≤7.70/1.25 | ≤8.00/1.30 | ≤7.80/1.30 | ≤8.20/1.40 |
| Insertion loss | dB | 9.55~10.85/≤0.70 | 9.25~11.15/≤0.85 | 9.60~10.90/≤0.75 | 9.30~11.20/≤0.85 |
| 5/95 | dB | 12.40~14.00/≤0.45 | 12.10~14.35/≤0.55 | 12.45~14.05/≤0.50 | 12.15~14.40/≤0.55 |
| 3/97 | dB | 14.50~16.35/≤0.35 | 14.10~16.75/≤0.45 | 14.55~16.40/≤0.40 | 14.15~16.80/≤0.45 |
| 2/98 | dB | 16.15~18.25/≤0.30 | 15.65~18.70/≤0.35 | 16.20~18.30/≤0.35 | 15.70~18.75/≤0.40 |
| 1/99 | dB | 19.05~21.35/≤0.25 | 18.55~21.85/≤0.30 | 19.10~21.40/≤0.30 | 18.60~21.90/≤0.35 |
| PDL | dB | ≤0.1 | ≤0.15 | ≤0.1 | ≤0.15 |
| Directivity | dB | ≥50 | | | |
| Maximum Power Handling | W | 1 | | | |
| Operating temperature | °C | -40 ~ +85 | | | |

1. Above specification are for device without connector, and may change without notice.
2. Other specifications can be made on customer request.
3. IL is 0.3 dB higher and RL is 5 dB lower for each connector added.

Order information P/N: FBTC-①-②-③-④-⑤-⑥-⑦-⑧-⑨-⑩

When you inquire, please provide the correct P/N number according to our ordering information, and attach the appropriate description would be better. If need any connector, we do not recommend choosing a 250μm bare fiber pigtail. For mini size coupler, typical applications are bare fibers without connector.

| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |
|-------|-------|---------|-------------|--------------------|------------|-------------------|--------------|------------|---------|
| Type | Grade | Port | Wavelength | Coupling Ratio (%) | Fiber Type | Pigtails Diameter | Fiber Length | Connector | Package |
| MSWBC | P: P | 102:1x2 | 1315: | 50:50/50 | S28:SMF-28 | 25:250μm | 05:0.5m | 00:None | 2.4x25 |
| | Grade | 202:2x2 | 1310&1550nm | 40:40/60 | X:Others | | 10:1.0m | FP: FC/PC | 2.4x30 |
| | A:A | | | 30:30/70 | | | 15:1.5m | FA: FC/APC | 3.0x30 |
| | Grade | | | 20:20/80 | | | XX: Others | SP: SC/PC | |
| | | | | 10:10/90 | | | | SA: SC/APC | |
| | | | | 05:5/95 | | | | ST: ST/PC | |
| | | | | 02:2/98 | | | | LP: LC/PC | |
| | | | | 01:1/99 | | | | LA: LC/APC | |
| | | | | XX: Others | | | | XX: Others | |
| | | | | | | | | | |

Part Number Example: FBTC-MSWBC-P-202-1315-01-S28-25-10-00-2.4x25

Description: 2x2 mini size wide band coupler, P grade, 1310&1550nm, 1/99 coupling ratio, SMF-28e fiber, with bare fiber, 1.0m length fiber pigtails, without connector. Φ2.4x25mm package.

Ordering Information for Custom Parts

If you need to customize other specifications, please provide detailed description for your requirement.